

## UV hyperspectral camera BlueEye, preliminary datasheet

	BlueEye	BlueEye TEC	BlueEye Scientific
Sensor	Back-illuminated CMOS		Back-illuminated CCD (full frame architecture)
Sensor pixels	2048 x 2048		1056 x 1027
Active area (spatial x spectral)	typ. 1845 x 2048		typ. 920 x 1027
Pixel width	6.5 $\mu\text{m}$ x 6,5 $\mu\text{m}$		13 $\mu\text{m}$ x 13 $\mu\text{m}$
Bitdepth	16 bit (2 x 12 bit ADC @ low & high gain)		18 bit
Framerate	40 fps full frame		5 fps full frame
Binning (spatial   spectral)	x1, x2, x3   x1, x2, x3		-   x1, x2, x3
ROI (hor.   ver.)	(n+x)*32 pixel   (m+y)*8 pixel		-
Data interface	USB 3.1		USB 3.0, GigE
Optical interface	c-mount		
Power consumption	< 4.5 W	< 4.5 W + < 10 W (external power supply)	< 1.1 A, 230 VAC
Power supply	USB 3.1 Typ C	USB 3.1 Typ C + external power supply	External power supply
Exposure / shutter time	10 $\mu\text{s}$ ... 500 ms	10 $\mu\text{s}$ ... 20 s	1 ms ... 2000 s
Shutter type	rolling shutter		
Sensor cooling	passive	TEC: -25°C to 20°C (forced air cooling, liquid cooling optional)	TEC: -100°C to 20°C (multistage, forced air, liquid cooling optional)
Trigger input	„frame trigger“, „acquire“		„external trigger in“
Trigger output	„exposure“, „busy“		„exposure out“, „shutter out“

### Operating/storage conditions

Operating conditions	+10°C to + 40°C < 80% rel. humidity, non-condensing	0°C to 35°C
Storage conditions	-10°C to + 60 °C	0°C to + 35 °C

### Optical specifications (spektrograph)

Spectral range	typ. 220 – 380 nm	
Nominal dispersion	~0.1 nm / px	~0.2 nm / px
Spectral resolution	< 2 nm	< 1 nm
Spatial resolution	tba	
Smile / $\mu\text{m}$	< 160 $\mu\text{m}$	
Keystone / $\mu\text{m}$	< 20 $\mu\text{m}$	
F/#	2.4	
Standard slit-width	80 $\mu\text{m}$	30 $\mu\text{m}$

Please note that any specs on the data sheet are subject to change without notice.

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